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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,739	10/23/2006	Chalam Mahadevan	0056848-000001	6002

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EXAMINER
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DANG, PHONG SON H

ART UNIT	PAPER NUMBER
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3773

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/586,739	<b>Applicant(s)</b> MAHADEVAN, CHALAM	
	<b>Examiner</b> SON DANG	<b>Art Unit</b> 3773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/20/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. Claims 16 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 16 recites "the suture needle is a cylindrical shaft having a uniform diameter". It is unclear how a cylindrical shaft can have a uniform diameter when it is tapering at its ends as recited in claim 1. Claim 18 recites "as such distance from the tip of the suture needle where the diameter of the tapering ends is equal to the diameter of narrow suture". It is unclear what that distance and what that diameter is therefore that makes it indefinite.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

2. Claim 12 recites the limitation "the form of the crimp or plug" in the first line of Claim 12. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1, 3-11, 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 19706086 to Vantankhah-Barazandeh (Vantankhah-Barazandeh).

In Reference to Claim 1:

Vantankhah-Barazandeh teaches:

A suture needle and suture assembly, said assembly comprising a suture needle (1, Fig. 1) and suture (5, Fig. 4) said suture needle comprising a curvilinear (Fig. 1), substantially arched shaft tapering at the ends thereof to form two tips for impalement of tissue (Fig. 1); a groove (4, Fig. 2) being provided on the needle approximately equally remotely located from the said tips and running along the length thereof for substantially housing the suture; a hole (3, Fig. 1) provided from the bottom of the groove cavity and extending through to the opposite surface of the shaft for securing the suture.

In Reference to Claim 3:

Vantankhah-Barazandeh teaches:

An assembly according to claim 1 (see rejection of Claim 1 above), wherein the said groove is on either the inner or on the outer (4, Fig. 2) surface of the needle (1, Fig. 2).

In Reference to Claim 4:

Vantankhah-Barazandeh teaches:

An assembly according to claim 1 (see rejection of Claim 1 above), wherein the hole (3, Fig. 1) is provided substantially through the center of the groove (4, Fig. 2).

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In Reference to Claim 5:

Vantankhah-Barazandeh teaches:

An assembly according to claim 1 (see rejection of Claim 1 above), wherein said suture (5, Fig. 5) comprises of a section having a diameter appropriate to the diameter of the needle and a narrower section (Fig. 5).

In Reference to Claim 6:

Vantankhah-Barazandeh teaches:

An assembly according to claim 5 (see rejection of Claim 5 above), wherein the narrower section may be integrally formed with the suture (5, Fig. 5) or separately provided, the separately provided narrow section being attached at an end of the regular suture (Fig. 5).

In Reference to Claim 7:

Vantankhah-Barazandeh teaches:

An assembly according to claim 6 (see rejection of Claim 6 above), wherein the fastening means (eye let fastener 3, Fig. 5) is provided on one end of the narrow section.

In Reference to Claim 8:

Vantankhah-Barazandeh teaches:

An assembly according to claim 5 (see rejection of Claim 5 above), wherein the cavity formed by the groove (4, Fig. 2) is sufficient only to house the suture (5, Fig. 5) having a diameter appropriate to the diameter of the needle (1, Fig. 1), or the narrower section.

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In Reference to Claim 9:

Vantankhah-Barazandeh teaches:

An assembly according to claim 5 (see rejection of Claim 5 above), wherein the narrow end of the suture (5, Fig. 5) is housed in the groove (4, Fig. 2), the length of the narrow section being at least one half of the length of the groove (4, Fig. 2).

In Reference to Claim 10:

Vantankhah-Barazandeh teaches:

An assembly according to claim 1 (see rejection of Claim 1 above), wherein the hole (3, Fig. 7) comprises of two coaxially aligned hollow cylindrical cavities with differing diameters (Fig. 7).

In Reference to Claim 11:

Vantankhah-Barazandeh teaches:

An assembly according to claim 10 (see rejection of Claim 10 above), wherein the cylindrical cavity with smaller diameter terminates at the bottom of the groove (4, Fig. 7), said diameter being equal to or greater than the diameter of the suture to enable threading (the suture is being thread through the hole).

In Reference to Claim 14:

Vantankhah-Barazandeh teaches:

An assembly according to claim 1 (see rejection of Claim 1 above), wherein sum of the width of the suture running along the body of the needle and out of the groove is lesser than or equal to the diameter of the shaft at its widest

(Fig. 5, the width of the suture has to be small so that it can run along the groove in the shaft of the needle).

In Reference to Claim 15:

Vantankhah-Barazandeh teaches:

An assembly according to claim 1 (see rejection of Claim 1 above), wherein the width of the groove (4, Fig.2) is lesser than, approximately one-third, the diameter of the shaft of the suture needle (1, Fig. 2) at its widest.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vantankhah-Barazandeh in view of US Patent No. 2,199,025 to C.E. Conn (Conn).

Vantankhah-Barazandeh teaches:

An assembly according to claims 1 and 10 (see rejection of Claims 1 and 10 above), wherein the suture is secured through the hole (fastener eyelet 3, Fig.5) by a means for fastening. The crimp or the plug is substantially equal to the diameter of the cylindrical cavity with larger diameter so as to enable resilient fastening (Ends of suture in Fig. 6 is used to retain suture in fastening hole 3).

Vantankhah-Barazandeh fails to teach:

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The means for fastening being a crimp or a plug in Claim 2.

The form of the crimp or plug remains in the cylindrical cavity with larger diameter so as to provide the profile of the needle surface for impalement of tissue in Claim 12.

The crimp or the plug is circular in Claim 13.

Conn teaches:

A surgical incision member comprising:

The means for fastening being a crimp or plug (10, Fig. 1)

The crimp or the plug is circular (10, Fig. 1)

It would have been obvious to one having ordinary skill in the art at the time of the invention to modified the means for fastening of Conn into the assembly of Vantankhah-Barazandeh and retain in the cylindrical cavity of the needle in order to enhance the fastening means of the suture into the needle device so that the suture would not go through the retaining hole in the needle.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vantankhah-Barazandeh in view of US Patent No. 5,417,699 to Klein et al. (Klein).

In Reference to Claim 17:

Vantankhah-Barazandeh teaches:

An assembly according to claim 1 (see rejection of Claim 1 above).

Vantankhah-Barazandeh fails to teach:

Wherein the suture needle is composed of titanium.



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Klein teaches:

Wherein the suture needle (20, Fig. 2) is composed of titanium.

It would have been obvious to one having ordinary skill in the art at the time of the invention to have substituted the needle material of Klein with the needle material of Vantankhanh-Barazandeh to enhance its superelastic condition.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No. 2,516,710 to Mascolo teaches a double point surgical needle. US Patent No. 5,478,344 to Stone et al. teaches a surgical suturing apparatus with loading mechanism.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SON DANG whose telephone number is (571)270-5809. The examiner can normally be reached on Monday-Friday 7:30 AM - 5:00 PM EDT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jackie Ho can be reached on 571-272-4696. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SD

/(Jackie) Tan-Uyen T. Ho/  
Supervisory Patent Examiner, Art Unit 3773